

go far towards the resolution of an inveterate controversy. Numerous instructive illustrations and a detailed summary in English should be helpful to readers not conversant with the German language.

A. MEYER

**MODELS OF THE NERVOUS SYSTEM** By Sid Deutsch. (Pp. vii + 266; illustrated. 94s.) John Wiley: London. 1967. This book is primarily concerned with the pattern-recognizing functions of the nervous system. It is evident from the first few chapters that the book is intended for aspiring bioengineers trained in the physical sciences. For example, complex numbers are introduced in both the exponential and the polar form without any explanation of the concepts involved. One is therefore inclined to ask what impression of the nervous system the engineer will gain from reading this book. He will discover that the brain is made up of neurones which can be modelled by a system having pulse-width and pulse-height modulation as well as pulse-frequency modulation. This is 'justified on the ground that a meaningful response in a living organism is generally the algebraic summation of many individual responses'. Unfortunately this treatment gives the impression that the brain is to be seen as a digital rather than as an analogue machine.

From consideration of chains of neurones the author moves through neurone networks modelling pattern recognition in each of the sensory modalities. This part of the book is best summed up by a sentence from the preface, 'Wild conjecture is a shock front that always accompanies the advance of science'.

D. J. MCFARLAND

**HYPOTHALAMUS UND THALAMUS. EXPERIMENTAL DOKUMENTE** 2nd ed. By W. R. Hess. (Pp. viii + 78; 207 figures. DM 48.) Georg Thieme: Stuttgart. 1968.

This is not a monograph but an atlas illustrating experiments done in Hess's laboratory with his technique—not described here—of stimulating diencephalic structures and recording the resulting behaviour of the animals cinematographically. The book consists of pictures of cats in various postures and with various expressions, and pictures of the brain-stem indicating the position of the stimulating electrode, accompanied by a very brief text. The experiments were done over a period of 25 years and have all been published before, either in previous monographs and atlases or in scientific journals. There is no discussion and no review of the literature, but there is a bibliography of papers by the author and his collaborators.

**NEUROLOGY IN ORTHOPAEDICS** By Paul H. Sandifer. (Pp. xi + 63; 2 tables. 16s.) Butterworth: London. 1968.

Paul Sandifer's special knowledge has developed in relation to his work with both paediatricians and orthopaedic surgeons. This short guide to neuro-orthopaedic problems is concerned especially with diseases affecting children and should be very useful, particularly to young surgeons in orthopaedic departments.

W. RITCHIE RUSSELL

**BLOOD FLOW THROUGH ORGANS AND TISSUES** Edited by William H. Bain and A. Murray Harper. (Pp. xx + 515; illustrated. 84s.) E. & S. Livingstone: Edinburgh and London. 1968.

This volume reports the proceedings of an International Conference on Blood Flow through Tissues and Organs held in March 1967. Many important recent advances in knowledge are reported and over 20 of the papers are concerned with the central nervous system.

**PROGRESS IN BRAIN RESEARCH** Vol. 28. Anticholinergic Drugs. Edited by P. B. Bradley and M. Fink. (Pp. xvi + 184; illustrated. 85s.) Elsevier: London, Amsterdam, New York. 1968.

The papers in this volume represent the edited proceedings of a symposium entitled 'Anticholinergic Drugs and Brain Functions in Animals and Man', held during the fifth meeting of the Collegium Internationale Neuro-Psychopharmacologicum in Washington in 1966. This collection of papers is a unique and comprehensive account of the behavioural and physiological actions of anticholinergic drugs. Particular emphasis is placed, in this volume, on the paradoxical effects of such drugs in producing profound changes in EEG activity, without producing correspondingly dramatic changes in overt behaviour. This phenomenon of *dissociation* between EEG and behaviour, which is particularly evident after anticholinergic drugs, has proved to be of central importance in debates of the degree to which EEG records may be correlated or *associated* with behaviour. In addition, papers deal with the hallucinogenic activity of some anticholinergic agents, with cholinergic mechanisms in sleep and wakefulness, and with the effects of anticholinergic drugs on habituation and learning. The interactions between anticholinergic and other psychoactive drugs are also discussed.

Although the publication of symposium proceedings in this way may not always prove successful, this volume does appear to be a valuable contribution to this now very extensive series of specialized volumes on current topics in brain research. One may perhaps be disappointed to see so little attention paid to pharmacological effects of drugs at a neuronal level, with the exception of Dr. Bradley's own excellent contribution, and virtually nothing is included on neurochemical effects of these drugs. However, the volume, on the whole, is recommended to all interested in psychopharmacology, and in the correlation between electrophysiological records and behaviour.

L. L. IVERSEN

**NEURO-PSYCHOPHARMACOLOGY** Edited by H. Brill, J. O. Cole, P. Deniker, H. Hippus, and P. B. Bradley. (Pp. xxiv + 1278, illustrated. £21.15s.) Excerpta Medica Foundation: Amsterdam. 1966.

The Proceedings of the Fifth International Congress of the Collegium Internationale Neuro-Psychopharmacologicum, held in Washington, D.C. in 1966, are contained within the 1,250 pages of this volume. In all, nearly 250 communications or abstracts of communi-